

c
GEOGRAPHY OF
WEST BENGAL

By

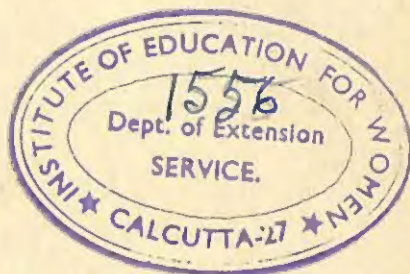
ANTHONY D'SOUZA

M. A. (Geog.), M. A. (Edn.), B. T., F.R.G.S. (London)

PROFESSOR, UNIVERSITY AND B. T. DEPARTMENTS,
ST. XAVIER'S COLLEGE, CALCUTTA



915.414
D'Sou



MACMILLAN AND CO. LIMITED
CALCUTTA • BOMBAY • MADRAS • LONDON

1962

MACMILLAN AND COMPANY LIMITED
London Bombay Calcutta Madras Melbourne

THE MACMILLAN COMPANY OF CANADA LIMITED
Toronto

ST MARTIN'S PRESS INC
New York

Copyright © by Anthony D'Souza, 1962.

First Published 1962

MADE IN INDIA
PRINTED BY R. L. SARAOGI,
AT THE TECHNICAL & GENERAL PRESS,
17, CROOKED LANE, CALCUTTA-1.

FOREWORD

During my regular inspections of the schools under my jurisdiction I have often asked young children in Geography classes "What do you learn about in Geography?" The answers vary, but one which recurs again and again is in effect: "In Geography we learn about other countries and the people who live in them." This answer underlines a mistaken emphasis that is often given to Geography teaching in primary classes where attention is, only too often, focused on picturesque and exciting elements from the lives of people in other countries, rather than on what appears to be the more humdrum study of the life of people in the children's home town, state or country. The net result is that our children, consciously or unconsciously, identify Geography with the study of 'other lands and peoples', and often show a greater interest in and familiarity with a Red Indian or Eskimo village than with an Indian village!

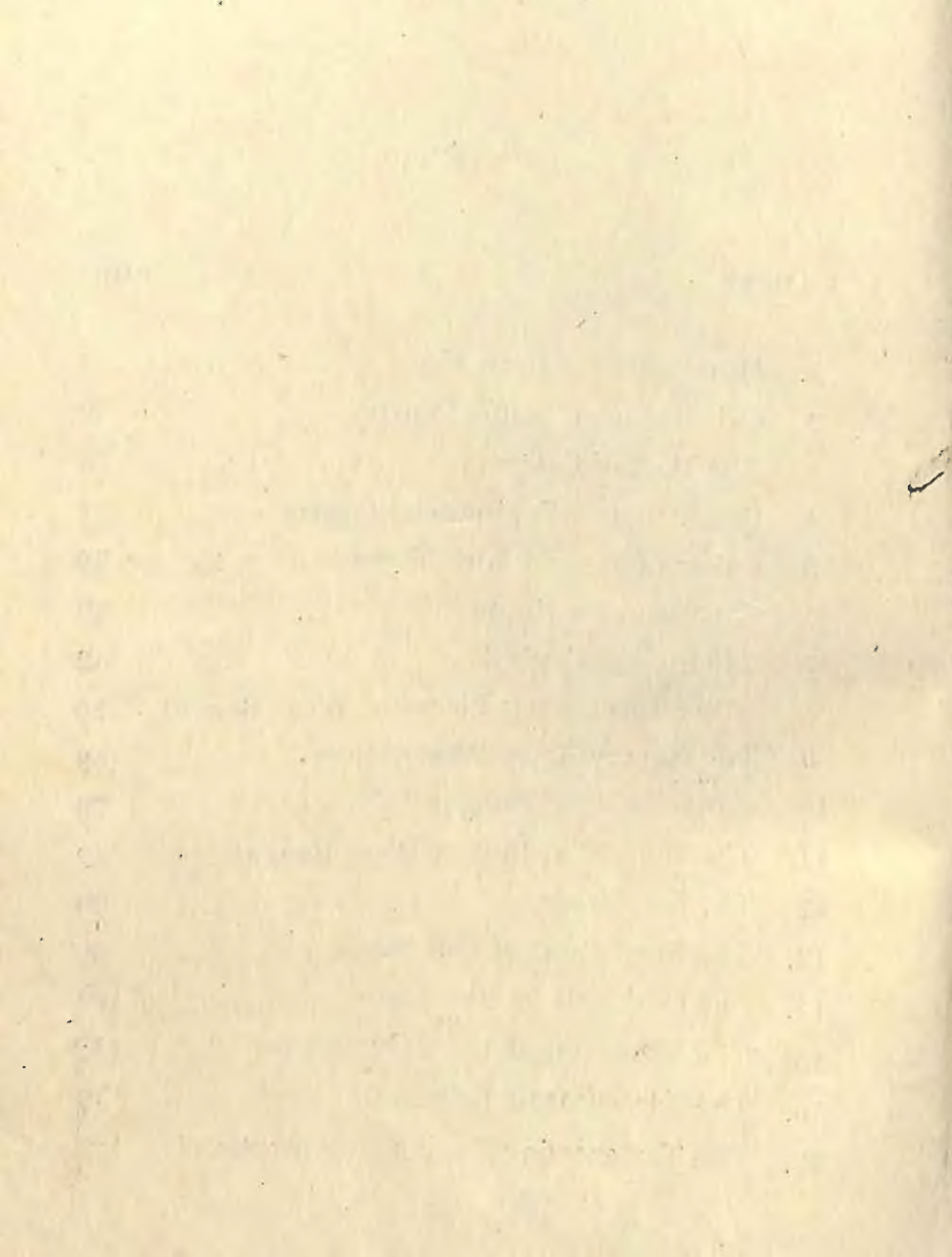
Among the first principles of sound teaching are that we should proceed from the familiar to the unfamiliar, from the near to the far, from

the particular and the concrete to the general and the abstract. Hence dynamic and effective Geography teaching should start with local Geography. This is realised in theory in most schools in West Bengal, but has not been put into practice, mainly I gather because of the lack of a suitable textbook on which teachers and children can draw for the study of their home town and their home state. Prof. D'Souza's textbook aims to fill this gap. It has been specially written with the needs of young children in mind and should prove useful to both pupils and teachers in the Primary schools and classes in the State. If it helps to stimulate an interest in, and an effective study of, local Geography, it will serve a very useful function indeed. I wish it every success.

AUSTIN A. D'SOUZA
Inspector of Anglo-Indian Schools,
West Bengal

CONTENTS

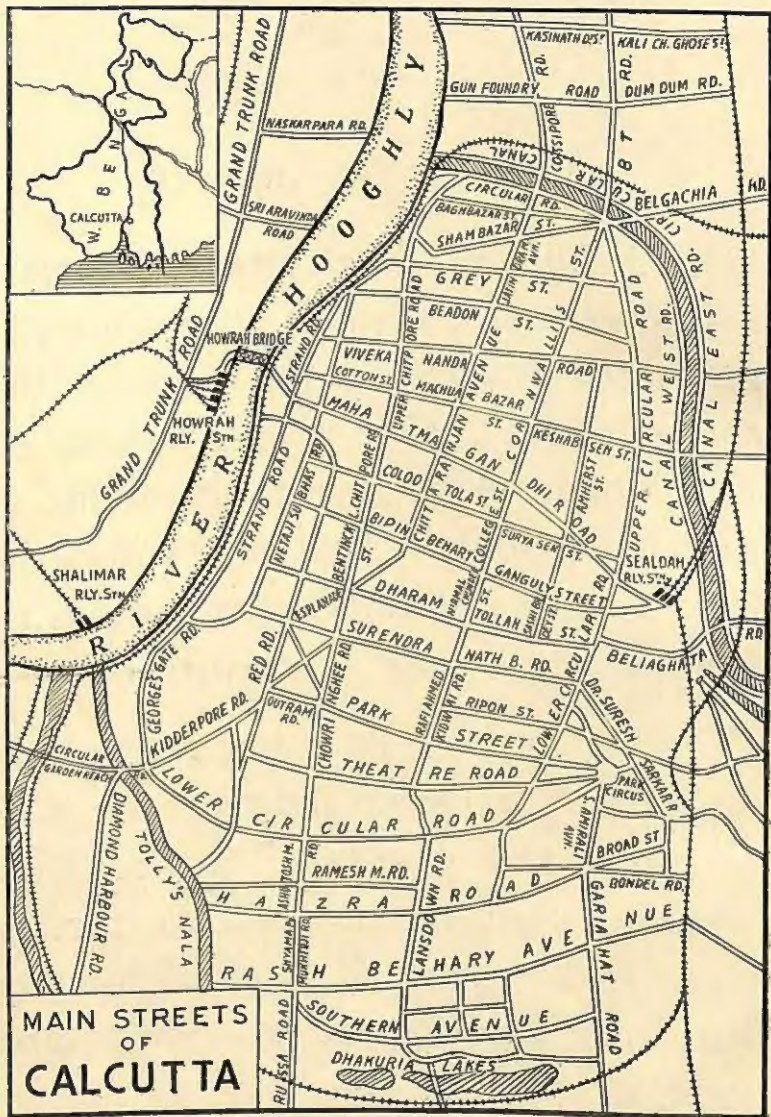
CHAPTER	PAGE
1. How Calcutta Grew Up	1
2. Calcutta as a Traffic Centre	8
3. The Port of Calcutta	18
4. Calcutta as a Commercial Centre	27
5. Calcutta as a Factory Town	32
6. Calcutta as a Home	39
7. Calcutta as Capital	52
8. Other Interesting Places of West Bengal	59
9. The New State of West Bengal	69
10. Gangetic West Bengal	76
11. The Industrial Belt of West Bengal...	82
12. The Sunderbans	90
13. The Food Bowl of Our State... ..	97
14. The Coal Belt of Our State	104
15. The Mango Gardens of Our State	112
16. The Terai Forest Region	119
17. The Tea-growing Regions of Our State	125



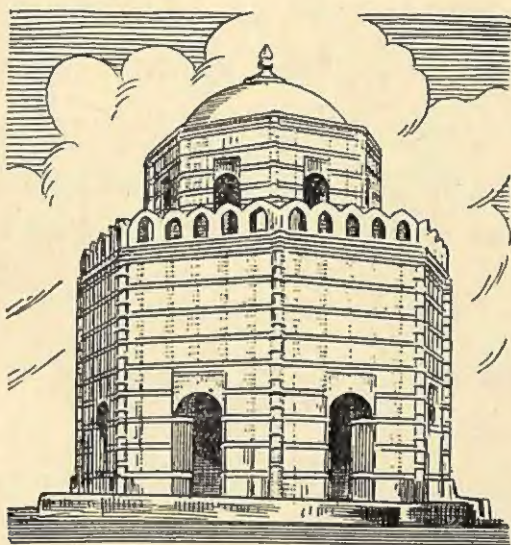
HOW CALCUTTA GREW UP

What is known as Calcutta today was, many years ago, a small area comprising three villages by the banks of the river Hooghly. One village was called Kali Kotta, which means the abode of the Hindu goddess Kali, after whom the city may have got its name, though many learned men do not agree with this.

Even in those days, merchants from far-off lands came up the river for trade and this area continued to attract the attention of rulers as well as foreign traders who eventually decided to settle here on account of its favourable location.



Among the earliest foreign traders who settled here were the British. It is said that Job Charnock, a British merchant, bought the three villages for about



JOB CHARNOCK'S TOMB

sixteen thousand rupees in 1690, and established a factory on behalf of the British East India Company. This company, in course of time, came to acquire

and rule over several parts of the country. The area grew rather haphazardly from three marshy villages into a functional one, which rapidly developed into a town. As time passed, the importance of Calcutta as a trading centre increased more and more. For many years, it was the headquarters of the East India Company and the capital city of India.

Calcutta, as we know it today, is the chief town and port of West Bengal. A river port, it is situated on the left bank of the Hooghly river, which is a tributary of the great and sacred river known as the Ganga (Ganges).

Of the six major ports of the Indian Union, four are seaports, but

Calcutta, a river port, is the greatest of them all. This is due mainly to its favourable position as it serves a rich and extensive hinterland which covers



THE HOWRAH BRIDGE

nearly the whole of the northern and north-western parts of the Indian Union. By the term hinterland we mean the area served by a port.

Calcutta is the largest city of the Indian sub-continent and is roughly about thirty miles at its greatest length and about eight miles at its greatest width, measuring about 270 square miles in area. It is situated in the plains and is connected with Howrah across the river Hooghly by a great structure of steel known as the Howrah Bridge, the only up-to-date bridge to cross the river to the western suburbs.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
- (a) Calcutta is the capital of the State of West Bengal.
 - (b) It is situated on the left bank of the river Hooghly.
 - (c) Calcutta is a seaport.
 - (d) The river Hooghly is a tributary of the river Ganga (Ganges).

(e) The British were one of the earliest foreign traders to settle at Calcutta.

2. What does the term 'hinterland' mean ?
3. What do you understand by 'functional village' ?
4. What is the approximate area of Calcutta ?
5. Give the name of the early British trading company which settled near Calcutta.
6. What does the word 'tributary' mean ?
7. Fill in the blanks :—

Calcutta is a _____ in the plains. It is connected with _____ across the river _____ by the Howrah Bridge. It is the _____ port of the Indian Union. Its hinterland covers almost all the _____ and _____ parts of the country. The importance of Calcutta as a trading _____ has increased more and more.

Projects

1. On the outline map provided, mark the river Hooghly and the approximate location of Calcutta.
2. Shade the areas that are served by the port of Calcutta.
3. Draw a simple sketch of any part of the town showing the market-place, streets leading to it, nearest railway station, church, etc.

CALCUTTA AS A TRAFFIC CENTRE

(Calcutta has many wide and well-tarred roads, especially in the newly deve'oped southern and south-eastern parts of the city. Recently some have been built of cement concrete. The trees which have been planted along the roadside give shade and make the roads beautiful when they blossom. The sub-roads are linked up with the main roads.

Amongst the more important broad roads are Chowringhee, Chittaranjan Avenue and Lower Circular Road which run through the centre of the city. Being an old city, many of its

IMPORTANT BUILDINGS AND PLACES OF CALCUTTA

- ① HOWRAH BRIDGE
- ② JAIN TEMPLE
- ③ SEALDAH R. STN.
- ④ CALCUTTA UNIVERSITY
- ⑤ HOWRAH R. STN.
- ⑥ WRITERS' BUILDINGS
- ⑦ G. P. O.
- ⑧ MEDICAL COLLEGE HOSPITAL
- ⑨ DALHOUSIE SQUARE
- ⑩ TELEPHONE BHAWAN
- ⑪ NEW SECRETARIAT BLDGS.
- ⑫ RAJ BHAWAN
- ⑬ EDEN GARDENS
- ⑭ OCHTERLONY MONUMENT
- ⑮ ALL-INDIA RADIO

- ⑮ INDIAN MUSEUM
- ⑯ FORT WILLIAM
- ⑰ BOTANICAL GARDENS
- ⑱ RACE COURSE
- ⑲ VICTORIA MEMORIAL
- ⑳ ST. PAUL'S CATHEDRAL
- ㉑ CALCUTTA ZOO
- ㉒ NATIONAL LIBRARY
- ㉓ KALI TEMPLE
AT KALIGHAT
- ㉔ DHAKURIA LAKES





A VIEW OF A CALCUTTA STREET

streets are a dangerous whirlpool of buses, motor-cars, trams, ox-carts, horse-carriages, rickshaws, hand-drawn wagons, stray cattle and thousands of pedestrians.

Calcutta is connected with the rest of India by the Grand Trunk Road through Howrah. This is the only main road which winds through thirty miles of congestion and connects the



THE MAIDAN

city with the industrial belt. Another road of a similar type is the Barrackpore Trunk Road which connects the city with the northern parts of the country. No highway links Calcutta with the south. Madras, Bombay and Nagpur are also linked with Calcutta by national highways.]

In the heart of the city, we have a

maidan known as the 'lungs of Calcutta'. It is a central park of two square miles where all kinds of outdoor



A DOUBLE-DECKER BUS

games and other forms of recreation are held regularly. It is interesting to note that this open space known as the maidan was purposely kept clear with Fort William on one side along the river. But, in recent years, some buil-

dings have been constructed on much of this vacant land, one of these being an up-to-date planetarium.

[The busy parts of Calcutta are served by trams and buses and one could best get to know the city by travelling in one of these. Bus transport has been nationalised and, in recent years, there has been a tremendous increase in the number of motor vehicles on Calcutta roads.

Most visitors to Calcutta arrive by train at one of the two terminal stations located at Howrah and Sealdah. These two railway stations link the city with practically the whole of India. From the many platforms, trains are constantly leaving and others arriving throughout the day and much of the night.



THE HOWRAH STATION

Calcutta has two railway systems :-
(1) The Eastern Railway with its headquarters at Fairlie Place and (2) The South-Eastern Railway with its headquarters at Garden Reach. Electric traction is so far confined to less than a hundred miles on the Eastern Railway. It has been proposed to con-

struct a circular railway connecting the suburban areas around Calcutta. It will be a monorail system. This would greatly lessen the hardship experienced by the people who come to the city daily to work or to sell their goods and foodstuffs.

A subway and a vehicular tunnel beneath the river Hooghly are other



AN ELECTRIC TRAIN

schemes to ease traffic congestion in the city.

Calcutta has an up-to-date airport in one of its suburbs at Dum Dum. It is not only the most important airport of India but forms a connecting link between the East and West for all international airlines.

Thus we see that road and rail bring goods as well as people into Calcutta, making it one of the most important traffic centres of the Indian Union. }

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) Calcutta has many wide and well-tarred roads.
 - (b) The trams and buses of Calcutta are sufficient for the population.
 - (c) There are many railway stations serving Calcutta.

- (d) Most trains serving Calcutta have been electrified.
- (e) The number of motor vehicles on Calcutta roads has not increased very much.
2. In which parts of the city do we find good roads ?
 3. What does 'National Highway' mean ?
 4. Why has it been proposed that a 'Circular Railway' be constructed for Calcutta ?
 5. What does 'nationalised bus system' mean ?
 6. Why is the Calcutta maidan known as the 'lungs of Calcutta' ?
 7. Where is Calcutta's airport located ?
 8. Fill in the blanks :—

Broad roads like _____ and _____ run through the _____ of the city. The Grand Trunk Road through _____ connects the city with the rest of _____ India. The city's terminal railway stations are located at _____ and _____. The head office of the _____ Railway is in Fairlie Place while that of the _____ Railway is at Garden Reach.

Projects

1. Ask the Geography teacher to arrange a visit to one of the railway stations. An inspection of the engine, railway coaches, etc., may be arranged with the railway authorities.
2. A student who has already made a railway journey, may be asked to describe his or her experiences of the trip during the geography class.
3. Small groups of students may be taken by bus through the important parts of the city by the teacher.

THE PORT OF CALCUTTA

The river Hooghly on which the port of Calcutta stands has a fairly deep channel. At high tide, ocean-going vessels can pass inland as far as Howrah Bridge and unload in waters that are not much disturbed by violent storms.

In the past, ships anchored in the river and carried out loading and unloading operations in country boats and barges connected with landing-places on the banks. But with the rapid increase in the size of the vessels, docks were constructed so that vessels could come alongside and load as well as un-

load directly on to the wharves or even into railway wagons. Unfortunately, in recent years, the river which is the



THE VIEW OF A JETTY

120-mile outlet from the city to the Bay of Bengal, is fast silting up and making navigation increasingly difficult. The numerous tributaries of the Ganga (Ganges) like the Damodar, Rupnarayan, Mor, etc., bring huge amounts

of silt or alluvium and deposit them in the bed of the Hooghly. So the river



KIDDERPORE DOCKS

has to be regularly dredged so as to enable ocean-going vessels to enter the port from the mouth. In the Five-

Year Plans of the Indian Union, special provision has been made for the expansion of Calcutta Port by the construction of more docks.



THE CRANES

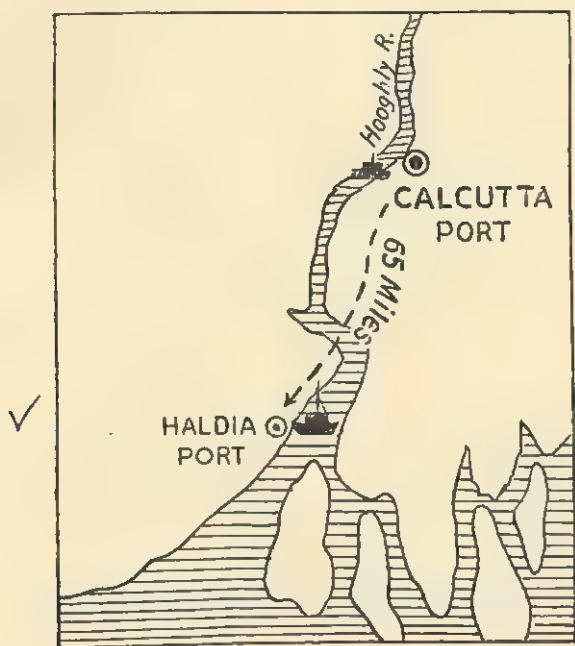
Calcutta's port facilities lie along the river in the southern and south-eastern parts of the city with the docks, *bunders*, wharves as well as the dry

docks where ships are repaired. These docks are equipped with all types of cranes for loading and unloading goods and there are storage facilities in the large sheds nearby.

(Unlike the port of Bombay, which is a seaport, the ships that enter Calcutta Port are limited in tonnage which is usually less than ten thousand tons, and they must enter or leave it at or near high tide. As navigation on the river Hooghly is difficult owing to strong undercurrents and restricted navigation channels, all ships that enter or leave Calcutta Port are escorted by pilots. Similarly, when ships enter or leave the docks, the Harbour Master takes charge.

In spite of all these difficulties,

ships from all over the world visit the port of Calcutta and they bring with



them and take away great quantities of commodities of almost every kind.

Through the city's port pass about half of India's exports, especially jute and tea. Into Calcutta come machinery

and other equipment that are needed for building up the various industries connected with iron and steel in the north-west of the city.)

As Calcutta Port is always congested, and as many ships are held up at Sandheads near the mouth of the river, a subsidiary port, 65 miles from Calcutta down the river, has been opened at Haldia. The Union Government proposes to spend about 75 crores of rupees under the Third Five-Year Plan to develop a deep-water port at this point.

The importance of Calcutta as a port has been greatly felt by those responsible for the economic development of our country, so much so that they feel that for the future economic

development of all India, Calcutta holds the key.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case :—
 - (a) The Hooghly is fairly navigable up to Howrah Bridge.
 - (b) Ships entering Calcutta port are limited in tonnage.
 - (c) Navigation on the Hooghly is easy.
 - (d) Ships from all over the world visit the port of Calcutta.
 - (e) Haldia is a deep-water port near Calcutta. ...
2. Why has the Hooghly to be dredged regularly?
3. What provision has been made for the expansion of Calcutta Port?
4. What does 'subsidiary port' mean?
5. Where is Haldia?
6. Why are docks constructed at a port?
7. Fill in the blanks :—

Calcutta's docks are equipped with all *types* of _____ for loading and unloading _____. There are storage facilities in the large _____ nearby. Ships that enter Calcutta _____ are limited in _____, and they must enter or leave it at or near _____ tide. When the port is congested, many ships are held up at _____, near the mouth of the river.

The Union Government proposes to spend about _____crores of rupees under the_____Five-Year Plan for the development of Haldia. The_____takes charge of the ship going to the docks and the_____takes charge of the ship coming up the river.

Project

Ask the Geography teacher to arrange an excursion to Calcutta docks area. A permit may be available from the port authorities to visit one of the ships in the docks. Find out what articles the ship has brought and what articles she proposes to take out. Make a note of the special places known as the hatch and the hold of the ship where these articles are usually stored. Finally, prepare a list of the articles which are generally imported into and exported from the port of Calcutta.

CALCUTTA AS A COMMERCIAL CENTRE

We have already learnt that the port of Calcutta serves a very rich and extensive hinterland covering nearly the whole of the northern and north-eastern parts of the Indian Union. We also know that it has a favourable site in the plains well connected by road, rail and water transport with the rest of the country. These factors are responsible for making Calcutta a market, a saleroom and a warehouse for the various industries. Almost any article made in India is available in some Calcutta warehouse. Consequently, foreign merchants come to this centre to buy the goods their customers re-

quire. Ships of all nations enter the Hooghly carrying a great variety of products which can be disposed of.



SHIPS LYING AT ANCHOR

They are also able to secure very easily, loads of goods for the return trip.

[Various activities such as buying and selling as well as loading and unloading give employment to many people in Calcutta. It is for this reason

that even people from the neighbouring states flock to this city for work.]

Besides the warehouses which are needed for storing goods, there are also



MEN WORKING NEAR THE TRANSIT SHED

vast offices here which keep records of the stock of goods, and of sales and purchases.

All this involves the handling of

great sums of money and this has made Calcutta a great banking centre. The insurance of ships, goods and property is another aspect of the vast amount of work carried on in the city.

We must not only think of the commercial activity of our city in terms of other nations of the world. There is also a great deal of internal activity, which is carried on throughout Calcutta by land, and by sea along the coast, and this is very many times larger than the commercial activity in the international sphere.

Both these factors are responsible for Calcutta's importance as one of the leading commercial centres, not only of the Indian Union but of the world.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) Calcutta serves a very rich and extensive hinterland.
 - (b) Calcutta is not well served by land and water transport systems.
 - (c) People from the neighbouring states flock to this city for work.
 - (d) Calcutta is one of the leading commercial centres of India.
 - (e) Calcutta is not a great banking centre.
2. What does 'warehouse' mean?
3. What does 'insurance' mean?
4. Why do foreign ships come to Calcutta Port?
5. Fill in the blanks :—

Ships of all——enter the Hooghly carrying a great variety of——. They can also easily secure——of goods for the——trip. Calcutta's commercial activity by——and sea along the——is very——. Almost anything made in——is available in some——warehouse.

Projects

1. Ask the Geography teacher to arrange a trip by launch down the river. Observe the activity on the river especially among the bigger vessels lying at anchor.
2. Students may be asked to collect information as to the great variety of commodities that are on sale in their locality or in their market.

5

CALCUTTA AS A FACTORY TOWN

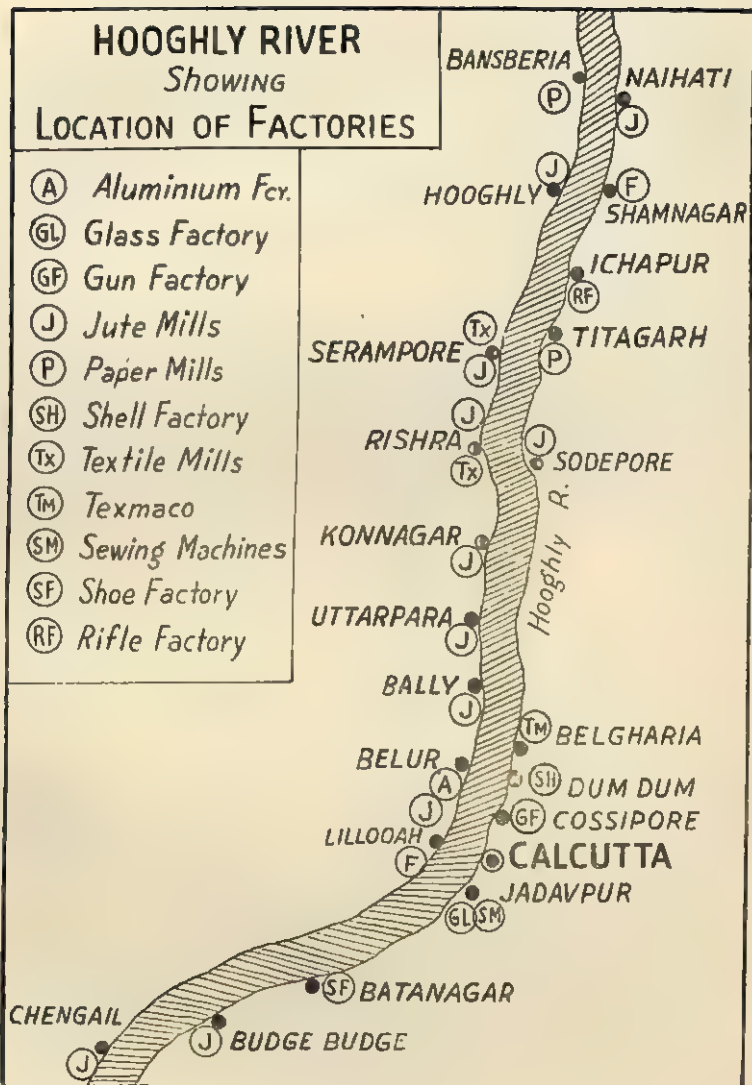
In the last chapter we learnt how Calcutta had become an important commercial centre as a market, sale-room and warehouse for various industries. In fact, Calcutta is also considered a factory town, itself making goods for its merchants to sell. But most of these factories are situated in the suburbs of the city or in the surrounding neighbourhood and their main offices for business transactions are located along Netaji Subhas Road which is the business locality of the city.

Calcutta is a factory town for

HOOGLHY RIVER

Showing
LOCATION OF FACTORIES

- (A) Aluminium Fcy.
- (GL) Glass Factory
- (GF) Gun Factory
- (J) Jute Mills
- (P) Paper Mills
- (SH) Shell Factory
- (Tx) Textile Mills
- (TM) Texmaco
- (SM) Sewing Machines
- (SF) Shoe Factory
- (RF) Rifle Factory





A PART OF A COTTON MILL

various reasons. Raw materials such as jute and cotton fibres, iron and manganese ore and coal are easily available. The communication facilities are good and there are ready markets.

Its great population (approaching nearly 5 millions) requires many things that are best made near at hand, either because of their freshness as in the case



INSIDE A JUTE MILL COMPOUND

of food products, or because of the cost of carriage specially in the case of bulky goods. Moreover, its vast population provides labour for factories.

Calcutta's population is cosmopolitan, many coming from the adjoining areas for employment, and this is probably another reason why various industries have developed in and around

the city. As for the town itself, there is ready employment in various spheres, such as banks, docks, railways, business firms, government offices, and so forth.

The goods manufactured around the city require raw materials in great variety as well as fuel in vast quantities.

Fortunately for Calcutta, both raw materials and fuel are near at hand and so Calcutta has become one of the most important factory towns of the Indian Union. The outskirts of the town have become not only a suitable centre for the assembly of the varied raw materials but also the centre for the production of the finished goods. And above all, we have the advantages of the port and railway centre of Calcutta. Thus we see that although most of the

factories of Calcutta are situated in the suburbs, Calcutta is nevertheless regarded as a factory town and, in fact, a major factory town of the Indian Union.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) Calcutta is not a market, saleroom, and warehouse for various industries.
 - (b) Goods manufactured near Calcutta retain their freshness.
 - (c) Labour for factories is readily available round Calcutta.
 - (d) There are no port and railway facilities at Calcutta.
 - (e) Calcutta's population does not require many things.
2. What does 'cosmopolitan' mean?
3. What does 'suburbs' mean?
4. Name the types of employment which are readily available round Calcutta.

5. Fill in the blanks :—

Most of the——are situated in the suburbs of the town. The——locality is in Netaji Subhas Road. Calcutta's population provides——for factories. Raw materials in great——as well as ——in vast quantities being available round the city, Calcutta could certainly be regarded as a ——factory—— of the Indian Union.

Projects

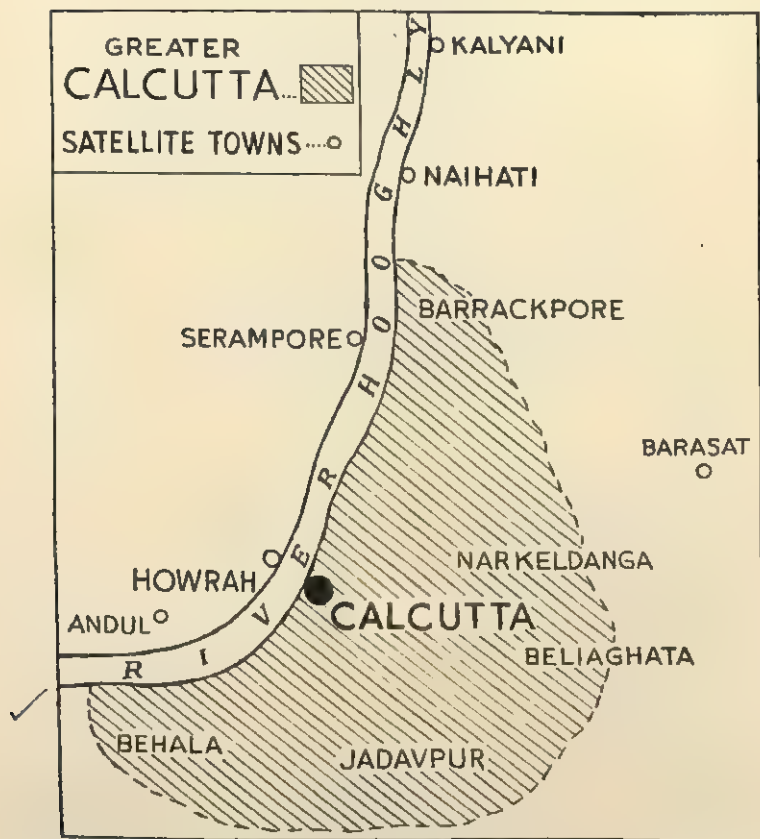
1. A picnic cum excursion may be arranged for the students by the teacher, e.g., to Bata Shoe Factory, Jute Mill, Dunlop Rubber Factory at Sahaganj, the Cigarette Factory at Agartara, etc.
2. What things are made in these factories :—
 - (i) for local consumption and
 - (ii) to be sent away for consumption elsewhere?

CALCUTTA AS A HOME

In the previous chapters we have learnt about the various functions of Calcutta as [a port and traffic centre and as an important commercial and factory town.

As a result ^{calcutta} of all these factors, there is gathered together a population of nearly five millions within the area of what is called "Greater Calcutta". This covers an area of about 270 square miles. A good percentage of the population live around the city, the remainder in suburbs and "dormitory" towns. (What is known as "Greater Calcutta" today extends up to Barrack-

pore to the north, Jadavpur and Behala to the south, Narkeldanga and Bellia-



ghata to the east, and Howrah to the west.

Some parts of Calcutta are dotted with clusters of flimsy mud huts. Quite a good number of people live in these slums.



A RESIDENTIAL BUILDING

Calcutta has long been known as a “City of Palaces”, but it is really an old city though the new parts have been built along modern lines.

These new parts are to be found

on the outskirts of the city. Most of the homes are in new housing estates which are like 'satellite towns'. Good examples of satellite towns of Calcutta City are Serampore, Budge Budge, Kalyani, Barasat, Andul and Dum Dum. Ford Foundation have made available a grant of nearly seven and a half million rupees to modernise the city with the help of some of the world's experts in urban planning.

To ease the congestion east of the city, and to further develop the satellite towns to the south, land is being reclaimed from twenty-four square miles of salt marsh, by dumping silt dredged from the Hooghly into the lowland now drained of brackish water. The West Bengal Government propose to

make the reclaimed area available for residential purposes to the middle and low-income groups which will ease overcrowding in the city. This scheme is expected to be completed within six years.)



DHAKURIA LAKE (Rabindra Sarobar)

(To provide a vast population, as in Calcutta, with all its requirements, gives rise to various forms of business. Milk comes mainly from Haringhata, a

new milk colony nearby, while food supplies are largely obtained from the neighbouring areas. For instance, rice, the staple crop, is available from home cultivation as well as from the neighbouring states. It is also imported from Burma and Thailand. Fruits and vegetables come from the adjoining areas and fish requirements come from the rivers as well as the sea not far from the city.

So, what we must remember is that Calcutta produces nothing in the way of food. We get our food from places round about the city and sometimes even from faraway places. This would not be possible without the good roads, railways and shipping facilities which Calcutta possesses.

Every major town or city has various functions and each function is located in a definite part of the city. Calcutta is no exception and although



THE VICTORIA MEMORIAL

it is an old city, we find various aspects of activity located in definite areas. For instance, in the last chapter we learnt where the business centre of the town was located. We already know

that most of the housing areas are in the suburbs. In the same way, the amusement centre has a definite place and in the case of our city it is most concentrated in the heart of the city, though cinemas are everywhere. Studios for the production of cinema films are situated in the suburban areas like Tollygunge and Daksineswar. Other forms of amusement include circus parties and the like which come to the city during the cool season.

Calcutta's pleasant attractions include the museums which are treasure-houses of Indian lore, the Eden Gardens, the Victoria Memorial on the maidan, the Zoo in Alipore and the man-made Lake District. These provide recreational facilities for thousands.

Like other great cities, Calcutta is made of smaller neighbourhoods each with its own characteristic. Its New Market and bazaars are a delight to shoppers. It has a China Town with some of the best Chinese cooking west of Hong-kong. This locality is at present being remodelled.

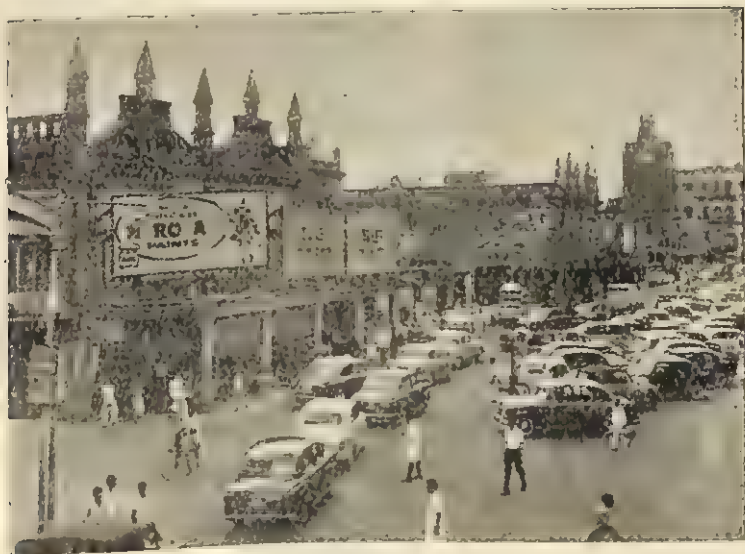
In some respects, Calcutta is also a tourist centre attracting hundreds of visitors both from other parts of the country and abroad throughout the year, and especially during the cool season. This gives rise to yet another characteristic industry, that is, providing accommodation in its numerous hotels.

The people of Calcutta are mostly Bengalees though other communities

are well spread. The Bengalees are a warm, friendly and hospitable people. Their language, which is called Bengali, is the State language. Prose and poetry written in the Bengali language are considered the richest in India. Modern Bengali literature owes its greatness to Rabindranath Tagore. He wrote numerous books in simple and graceful style. He established an educational centre at Bolpur which came to be known as Santiniketan. It is now a full-fledged University under the name of Vishwa Bharati.

Calcutta is the home of traditional music, drama, abstract painting, and an important centre of culture for the State. Calcutta is not only the home of the permanent settler and the tem-

porary abode of workers from the suburbs. In recent years, it has become the resort of about one and a half million refugees mostly from East



THE NEW MARKET

Pakistan. Some have no homes at all. They live in temporary shelters erected on open spaces. It is for this reason that our city has a considerable "float-

ing" population. Most of these refugees have been provided with jobs and houses by the Government. They have begun to look upon Calcutta as their home.

EXERCISES

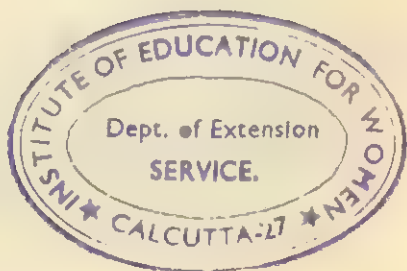
1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) Calcutta produces most of the food for the population.
 - (b) Milk comes from a milk colony called Dum Dum.
 - (c) Fruits and vegetables grown in the city are sufficient for the population.
 - (d) Calcutta's China Town is at present being remodelled.
 - (e) Calcutta is a capital of culture.
2. What does 'satellite town' mean?
3. Name some areas which are included in Greater Calcutta.
4. Why is Calcutta called 'the city of palaces'?
5. Where is the cinema film industry of Calcutta located?
6. Why is Calcutta considered a tourist centre?
7. What does 'floating' population mean?

8. Fill in the blanks :-

Greater Calcutta's population is about _____ millions. Most of the housing estates are found on the _____ of the _____. Rice, the staple _____, is also imported from _____ and _____. Fish requirements come from the _____ and _____ nearby. The amusement _____ of the town has a definite _____ and is concentrated in the _____ of the city. Most of the refugees who come to the city are from _____.

Project

Each student may be asked to draw a plan of the school or a street of his locality.



CALCUTTA AS CAPITAL

In very early days, Calcutta was the capital of the whole of India. This was due to its importance as a trading centre. But considering the whole of



ST. PAUL'S CATHEDRAL

the sub-continent, it did not have a favourable position. Delhi (later New Delhi), being more or less central, was chosen as the capital by the British and continues to be the capital of the Union Government.

But Calcutta remained the chief city of the province of Bengal, and later, with the creation of East Pakistan, it became the capital of the State of West Bengal in the Indian Union.

Here are to be found the residence of the Governor of the State and the various Government offices. These are mostly situated in the centre of the city round Dalhousie Square. Among the important buildings here are: Writers' Buildings, which is the old Secretariat; the Assembly



THE NEW SECRETARIAT
BUILDING

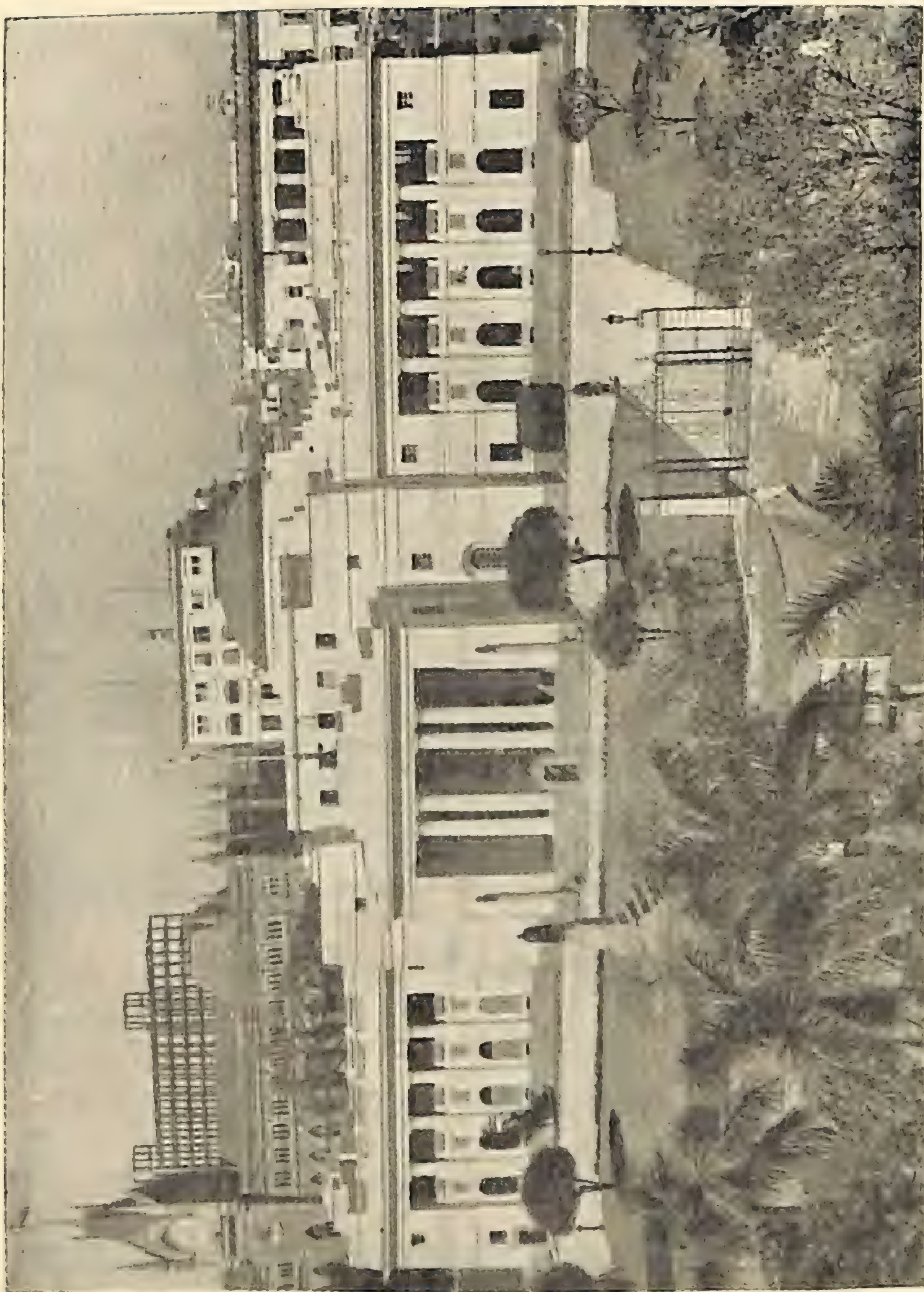
Buildings; the High Court and the New Secretariat Building nearby.

In some of these buildings are offices dealing with the affairs concern-



WRITERS' BUILDINGS

ing West Bengal in particular, and India in general. Calcutta is not only the major centre of trade and commerce in India but also the centre of



THE ASSEMBLY BUILDINGS

the great business of the Government of West Bengal.

When we study about other States of the Indian Union, we will find that



RAJ BHAWAN

there are other great cities and towns such as Bombay, Madras, Vishakha-patnam and Delhi.

Each of these has its own centres of amusement, markets and the like

but all these are far out-distanced by our city on account of its vast hinterland, its great trading facilities and tremendous population. In fact, we find that Calcutta has fast risen into prominence becoming not only India's premier city, but also the second city of the Commonwealth after London, and even one of the world's leading cities.

EXERCISES

1. Are the following statements true ? Answer 'Yes' or 'No' in each case.
 - (a) Calcutta is the capital of India.
 - (b) Calcutta has a central position occupying the whole sub-continent.
 - (c) Calcutta is a new city.
 - (d) Calcutta is the headquarters of the Commonwealth.
2. What does 'Capital' city mean ?
3. Give at least *two* reasons why Calcutta has become the premier city of India.

4. Fill in the blanks :—

Most government offices are situated round
—— in the —— of the city. Writers'
Buildings is the —— Secretariat. Calcutta is one of
the world's —— cities.

Project

A bus or a tram may be reserved to take the
students round the city showing them the important
government offices and other buildings of interest.

OTHER INTERESTING PLACES OF WEST BENGAL

In the previous chapters, we have learnt about many aspects of Calcutta, the largest city of our State and of India.

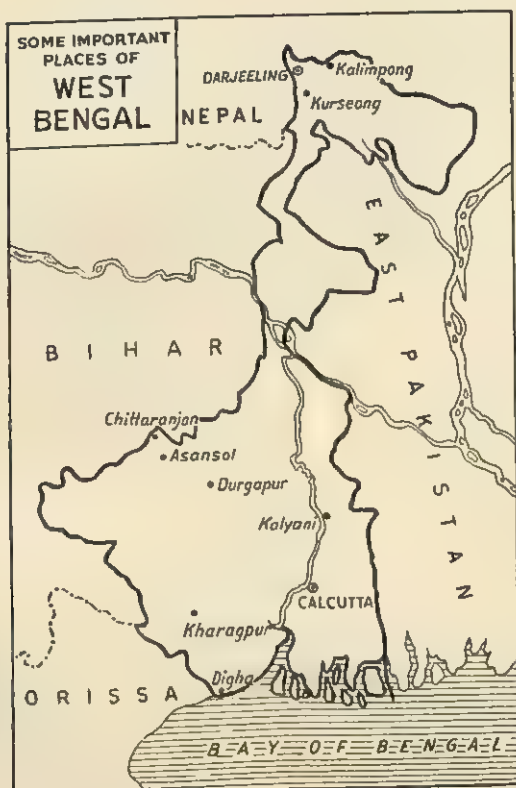
Perhaps it would be good for us to learn something about other towns and cities of India, which, of course, are not so large as Calcutta but which are fast growing in importance and which we should visit, at some time or another, in order to learn why they are growing so rapidly.

Some of the important towns of our State are :—

Asansol : It lies in the coal belt of our State. The iron and steel factories in its suburbs, at Kulti and Burnpur, have made Asansol very important industrially, making it the rival industrial zone to the Calcutta area. Besides iron and steel, industries connected with aluminium, plywood, ceramics, paper, firebrick, bicycles, glass and textiles have been established in its neighbourhood. *Raniganj*, nearby, is a coal-mining centre. It has some pottery works and a paper mill.

Chittaranjan and Rupnarayanpur : These are places within the Asansol area. The former is a newly-built town near Mihijam with a government locomotive factory, while the latter has a cable factory.

Kalyani : This is a new town of about 10,000 acres, 28 miles from Cal-



cutta and very near Kanchrapara. This town has been equipped with modern

amenities, especially the modern milk colony known as the Haringhata Dairy Farm which supplies the milk requirements of the vast population of Calcutta.

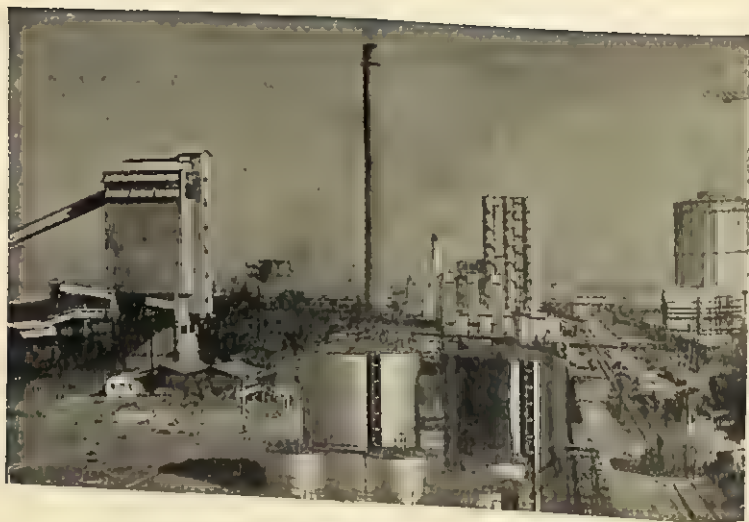
Here are also located some important government institutes and laboratories (e.g., the Agricultural Research Institute; the State Agricultural College; the River Research Institute) besides some industries.

Kharagpur: In Midnapore District, this town covers an area of about 15 square miles. It is an important railway junction and has a big railway workshop. Near this city is located the famous Indian Institute of Technology.



INDIAN INSTITUTE OF TECHNOLOGY

Durgapur (Bidhannagar): Previously this was a village within forests but now it has become another major industrial area of West Bengal. It is situated on the river Damodar about 15 miles south-east of Raniganj. We find the Durgapur Barrage here as well as a thermal power station and a steel factory. Other industries will soon be



COKE OVEN PLANT AT DURGAPUR

developed here, thereby expanding the area rapidly and making it another major industrial area of our State.

Darjeeling, Kalimpong and Kurseong : These are Himalayan hill stations. The delightful and bracing climate and the beautiful scenery attract visitors from all parts of the world. Besides being noted for tea and other



D. V. C. BARRAGE AT DURGAPUR

plantation crops, oranges and pine-apples are grown in abundance in the valleys and exported in large quantities.

Kalimpong is situated on the India-Tibet route and as such has become a big centre for wool and woollen products like carpets and shawls. Another important product of these towns is soft wood timber so necessary for the



SEA BEACH—DIGHA

manufacture of rayon, silk, paper, plastics, and other things.

Digha: This is a newly opened sea resort about 100 miles from Calcutta. Though this place is not yet well developed, it is expected to attract many holiday-makers from Calcutta in the near future.

EXERCISES

1. Are the following statements true ? Answer 'Yes' or 'No' in each case.
 - (a) Calcutta is the only town of West Bengal that has grown rapidly.
 - (b) Asansol lies in the coal belt of our State.
 - (c) Kalyani is near Kanchrapara.
 - (d) Kharagpur has a big railway workshop.
 - (e) Durgapur is situated on the river Damodar.
2. Where is the famous Indian Institute of Technology located ?
3. What is a 'Thermal Power Station' ?
4. What is the name of the modern milk colony in West Bengal ?
5. Why has Kalimpong become an important market for wool and wool products ?
6. Fill in the blanks :—

Industrially, Asansol is a rival of———. Chittaranjan has a———factory. Kalyani is about ——miles from Calcutta. There is a barrage at ——and a———factory. Fruits like———and ——are grown in the valleys round the hill stations. Another important product of these hill areas is———timber.

Project

It is possible that some schools are located not very far away from the towns mentioned in this chapter. It would be possible to take the students for a picnic cum excursion to visit one of these places and later they might be asked to write a few sentences on what they had seen. Now that the seaside resort at Digha is being developed, it would be possible to take a small group of students at a time to Digha for a few days during the summer or Pujah vacation.

THE NEW STATE OF WEST BENGAL

In the previous chapters we have learnt about Calcutta, our chief city, the capital of the new State of West Bengal. Look at the map of India given on the next page. Notice what a small portion of the map is covered by our State ! West Bengal is one of the smallest States of the Republic of India. It is ruled by a Governor residing at Raj Bhawan, Calcutta. It is about 34,000 square miles in area, and its population, according to the census of 1961, is a little more than 26 millions. It has a density of about 1,031 persons per square mile.

We all know that when a particular class of a school has too many students,



it is divided into smaller units or sections. This helps the teacher in

his work and enables the students to learn better. In the same way, a State is generally divided into smaller units for better management.

The State of West Bengal is divided into smaller parts called 'districts'. Our State is composed of fifteen districts, namely, Calcutta, Howrah, 24-Parganas, Hooghly, Burdwan, Bankura, Birbhum, Midnapore, Nadia, Murshidabad, Malda, West Dinajpur, Jalpaiguri, Cooch Behar and Darjeeling. Each district is under the authority of a District Collector or Magistrate appointed by the State Government.

Look at the map on page 72 showing the districts and their boundaries. Although these districts together form one single unit, the State of West



Bengal, it is not a well-connected whole. East Pakistan, the greater part of which is actually the former East Bengal, divides our State into two sections, the north and the south. The districts of Jalpaiguri, Cooch Behar and Darjeeling together form the northern section, which is completely cut off from the southern section composed of the remaining districts. Again Malda and West Dinajpur are separated from the rest of the State by the river Ganga (Padma).

Now, let us see who our neighbours are. Assam and East Pakistan touch our eastern border. To our west lie Bihar and Orissa. To our north we have the lofty mountains known as the Himalayas. On the south is

the Bay of Bengal. The Tropic of Cancer passes through the State near Calcutta.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) West Bengal is the smallest State of the Indian Republic.
 - (b) It is not ruled by a Governor.
 - (c) The northern section of the State is cut off from the southern section.
 - (d) Another name for the Ganga is the Padma.
 - (e) The Tropic of Cancer passes through the State.
2. Why is West Bengal divided into districts?
3. What does 'boundary' mean?
4. What is the area of West Bengal?
5. What is the approximate population?
6. Fill in the blanks :—

The_____of population of West Bengal is about 1,030_____per square mile. It is composed of_____districts. To the_____we have the Himalayan Range. Assam and East Pakistan touch our _____border. The Bay of Bengal lies to the_____and Bihar and Orissa are to the_____.

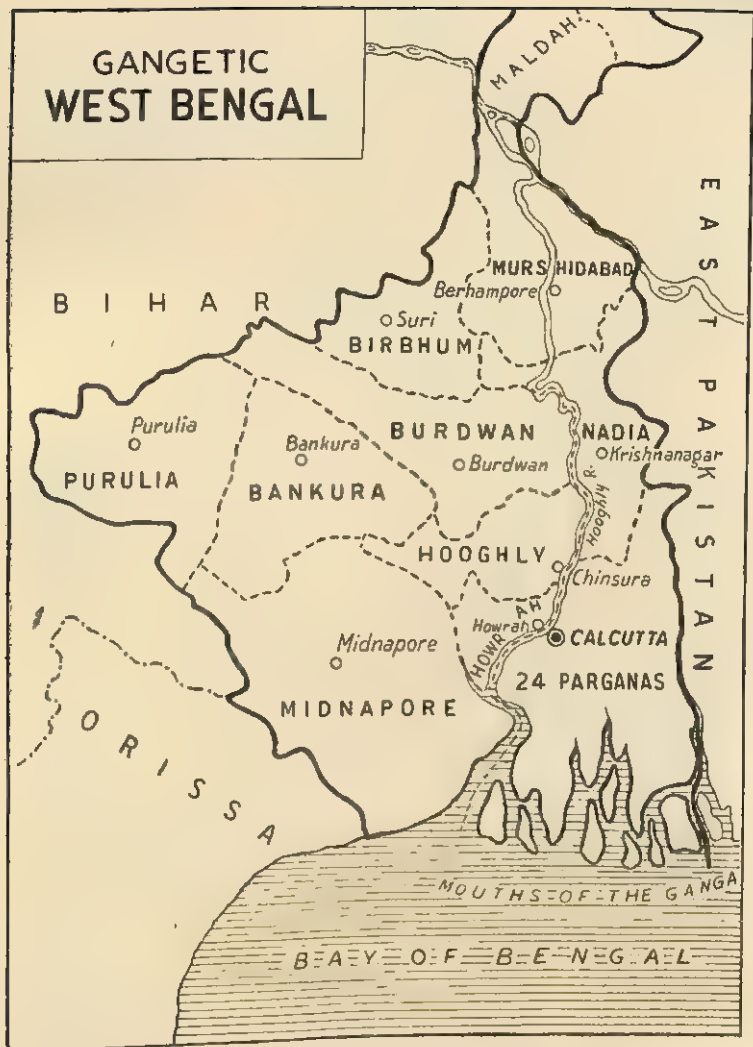
Projects

1. Ask each student to write a few sentences stating in which district of West Bengal he or she lives and also to mention if his or her school is in his or her home district. The student may be asked to write a short description of his or her district.
2. Alternatively, students may be asked to draw a map of the streets surrounding their school. Different symbols are to be used to indicate such things as shops, churches, factories, post offices, tramways, etc. A key to the symbols used must be given.

GANGETIC WEST BENGAL

We already know that our State is made up of two sections, the north and the south. The northern portion comprises the districts of Darjeeling, Jalpaipuri, Cooch Behar and the Plains of Malda and West Dinajpur. The remaining portion is known as Gangetic West Bengal and is composed of the districts of Calcutta, Howrah, 24 Parganas, Hooghly, Burdwan, Bankura, Birbhum, Midnapore, Nadia and Murshidabad. As it is drained by a typical Indian river, the Ganga (Ganges), hence the name Gangetic West Bengal.

The basin of a river includes all

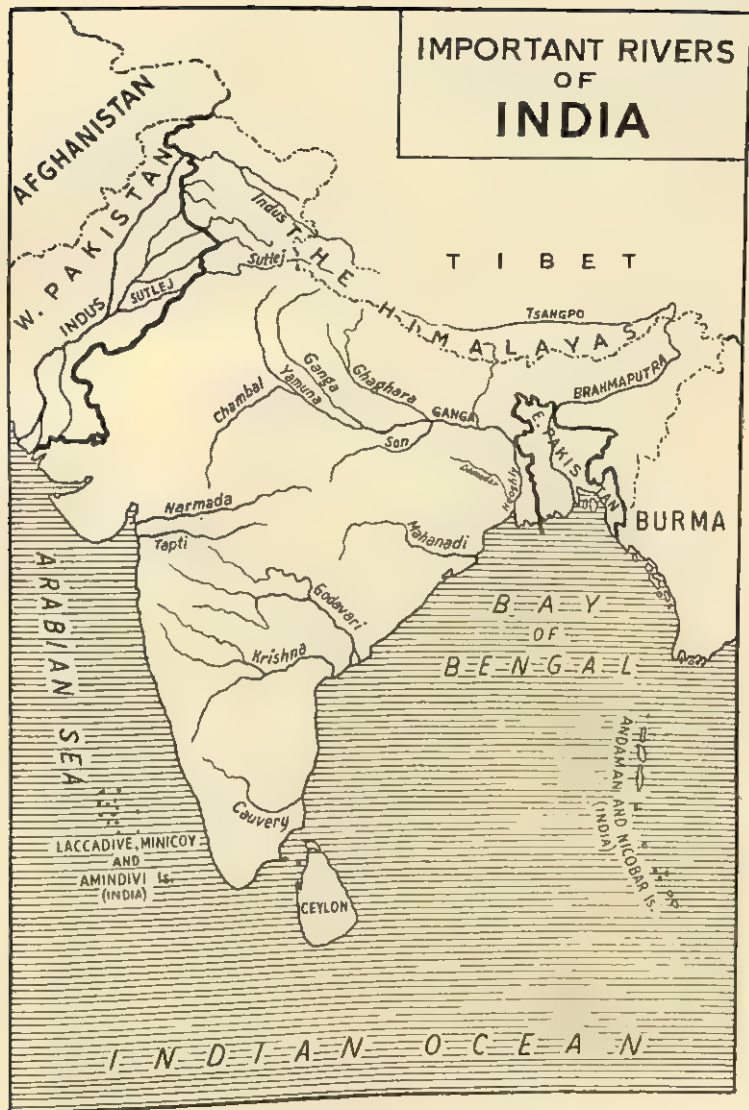


the land whose streams drain into that river. From the relief point of view, it is a hollow in the land, a depression, opening out generally into the sea.

When it is escaping from the highlands of the Himalayas west of the Darjeeling Himalayas, the Ganga (Ganges) flows in a deep narrow valley for many miles. It then descends to the more moderate heights of Uttar Pradesh and Bihar. In the next section of its course, it flows through several basins including those in West Bengal. Finally, it reaches the sea through a vast delta, built up through long ages from the silt or alluvium which, with the Brahmaputra, it deposits when in flood.

For the purpose of our study we

IMPORTANT RIVERS OF INDIA



shall further divide Gangetic West Bengal into four units : (a) the Plateau Fringe or Upland Region, (b) the Western Plain, (c) the Eastern Portion or the Delta Proper, and (d) the Sunderbans.

In the chapters that are to follow, we shall discuss each of the above units separately so that we may learn a little more of the remaining parts of our State. Perhaps some of the students of the class who live in one or other unit would like to hear about their home district and would feel happy that the other students of the class should have the opportunity of learning about the remaining parts of West Bengal as well.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) Hooghly District belongs to Gangetic West Bengal.
 - (b) Gangetic West Bengal is drained by the Ganga.
 - (c) The Ganga rises in the Darjeeling Himalayas.
 - (d) The Ganga is not a typical Indian river.
2. What does 'delta' mean?
3. What does 'depression' mean?
4. Name the four units which comprise Gangetic West Bengal.

(a)	(c)
(b)	(d)
5. Fill in the blanks :—

The Ganga Valley made up of——brought down by the——. The——joins the Ganga to form a——at their——before emptying into the——.

Project

Outline maps of West Bengal may be given to the students with the boundaries of the different districts and they may be asked to fill in the names of these districts; also to shade, in one colour, their home district, and in another colour, the district in which their school is located, if this is in a different district.

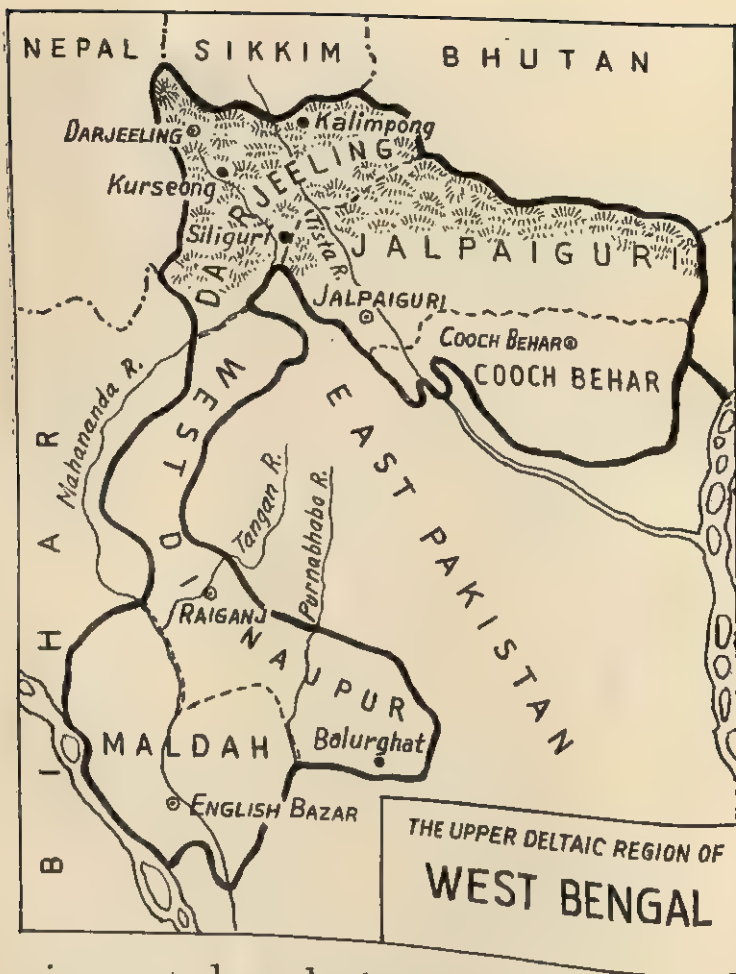
THE INDUSTRIAL BELT OF WEST BENGAL

The region of West Bengal is actually the upper deltaic region of our State and includes the eastern parts of Murshidabad, Nadia, and the major portion of the northern part of 24 Parganas. It covers most of that part of our State known as the Delta Proper.

In the last chapter, we learnt something about the different sections of the course of the river Ganga (Ganges). We now know that this river together with another, the Brahmaputra, reaches the sea through a vast delta, built up, through long ages, from the silt or alluvium deposited when these rivers

are in flood. Well, this is how both the upper and lower deltaic regions, known as the Sunderbans, were formed.

The upper deltaic region is a perfectly flat land composed of more recent alluvial deposits. It is covered by numerous meandering streams which are stagnant and generally choked with water hyacinth. The drainage is therefore bad, and shallow lakes known as *bils* and ox-bow lakes are a common sight. They are sometimes called 'Nadia Rivers'. Chief of this group are the Jalangi, Churni, and the Mathabhanga. The last named is so called because its source has been cut off from the remaining part of the river. With the completion of the Farakka Barrage across the Ganga, these rivers will be



rejuvenated and the districts of Murshidabad and Nadia will regain their past glory.

It is hot and wet here in summer but from November to January, it is cool and dry. The mean temperature of Berhampur, for instance, is about 108° F and in the cool season about 46° F, while the mean annual rainfall is about 55".

At present, very little natural vegetation is to be found here. The typical open monsoon forests which were to be seen in the past have been mostly cleared. The fresh alluvial soils are among the most fertile soils of the world.

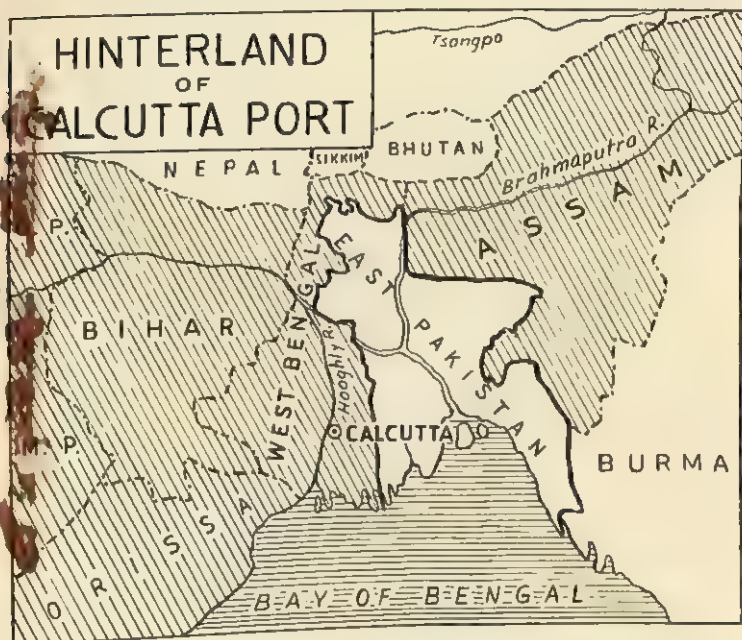
The flatness of the land and the abundance of water in the warmer months favour growth. Crops grow rapidly during this season. Rice covers most of the cultivated area followed by jute, sugar-cane, pulses, oilseeds and tobacco.

Some trees, like the mulberry and others, which grow in this area are visited by the silk-worm moth and their leaves form the food of the moth. Thus silk, one of the earliest known products of Bengal, is associated with the Murshidabad District of this region where weaving and spinning of silk still exist as a cottage industry. The government is now trying to revive sericulture.

As the great city and port of Calcutta lies in this area, we find many urban activities. There are many jute mills along the river banks. Factories making chemicals, paper, cotton and leather goods abound and there are rice mills and printing and publishing works. All these and the many other industries around Calcutta need fuel in

great quantities and a variety of raw materials.

During World War I, new factories



were built and others enlarged to produce more goods. In World War II, there was further expansion of the industries, producing especially a flood of war material. All this was due to

the fact that this region had many rich natural resources. It also had excellent means of transportation, both by land and by water.

The most suitable centre for assembling the varied materials and producing the finished goods was found to be on the outskirts of the great port and railway terminus of Calcutta. It is because of this that Calcutta and its suburban area have become the most important industrial belt not only of West Bengal but also of the whole of India.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) The streams of this region are in a stagnant condition.
 - (b) There are no shallow lakes or ox-bow lakes here.

- (c) The typical open monsoon forests are to be seen here.
- (d) Silk weaving and spinning are carried out on a large scale.
- (e) Calcutta with its suburbs area is not an important industrial belt of India.

2. When is a river said to be stagnant ?

3. One river is called the Mathabhangha. What does it mean ?

4. Why do crops grow rapidly here ?

5. What does the word 'sericulture' mean ?

6. Fill in the blanks :—

The upper deltaic region is a perfectly _____ land composed of more recent _____ deposits. The streams are generally _____ with water hyacinth. With the completion of the _____ Barrage across the _____, these rivers will be _____. The silkworm moth feeds on the _____ of trees like the _____. Many _____ mills are found along the _____ of the river.

Project

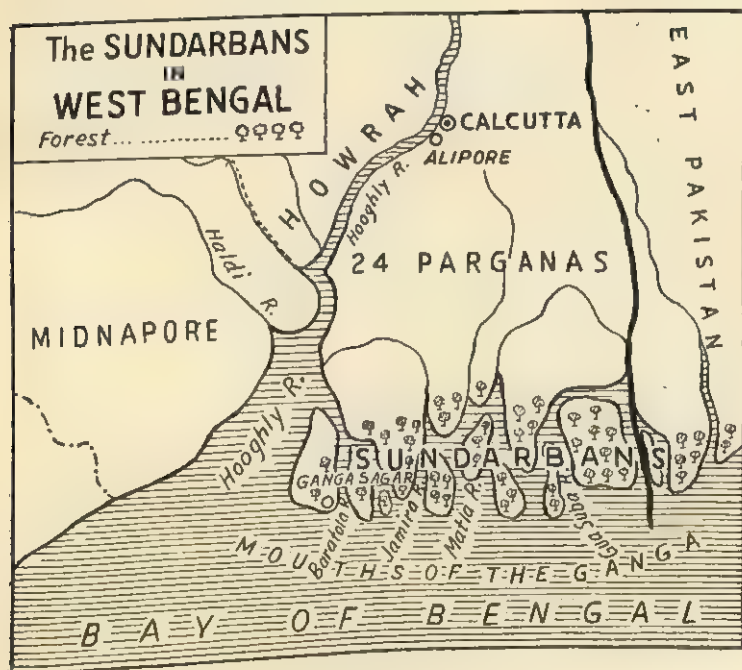
An excursion to the commercial museum might be arranged, where many raw materials as well as finished goods could be shown to the students, in particular those associated with the jute and silk industries. Later, the students might be asked to write a short essay about their visit.

THE SUNDERBANS

The dense evergreen forest region of West Bengal, commonly known as the Sunderbans, lies to the south of the upper deltaic region and covers the southern part of the 24 Parganas District. The Sunderbans are also known as Mangrove Forests. The soil is clay mixed with salt which it derives from the waters of the Bay of Bengal. It is drained by numerous distributaries of the river Ganga and these are continuously forming new islands (or islets) by the deposition of clay and sand. As a result many channels and tidal creeks are being silted. The islands are mar-

shy and are covered with dense vegetation.

It is hot and moist here, but the influence of the Bay of Bengal and the dense vegetation make the climate more equable. The temperature goes up to 82° F during the month of May



while in December and January, the maximum is 65° F. Rainfall is about 60" annually, falling mostly in July and August.

Dense evergreen forests cover this region and the typical tree is the 'Sundari' tree. Hence the name of the forest. The 'Keya' bush is also to be seen; it is a type of plant which grows on stilts and bears flowers that give out a fine odour.

Another native plant of these forests bears a viviparous fruit. It prepares its seedlings in the air while the fruit is still on the tree. Such a tree has breathing roots which look like a jungle of spikes. We may perhaps wonder why such unusual plants are found here. Plants of this type are

generally found in deltas of rivers and along tidal creeks. Nature has given them certain devices so that they can adapt themselves to the muddy and marshy conditions, to the salt content of the soil as well as to the rise and fall of the tides.

There are no roads and railways in these dense forests and the only approach is by country boats. Timber is collected, some of which is valuable while the poorer quality is used as firewood. The collecting of honey from the beehives has increased. But in recent years the area has become an important supplier of fish like *hilsa*, *bhetki*, and prawns to the markets of Calcutta. These are caught in the creeks.

We already know that much of the

land of the Sunderbans is marshy and that the soil contains salt.



A TYPICAL SCENE AT THE SUNDERBANS

Some of this land has been reclaimed for cultivation. How this is done is worth noting. First of all, the forests are cleared and embankments or walls are built with one-way valve gates to drain the rain water from the enclosed area. The salt contained in the soil is washed by the rain water for

about three or four years until the land is good enough for rice cultivation. Gosaba, for example, is a group of islands colonised by Sir Daniel Hamilton where the land was reclaimed in this way. The same procedure is being adopted to reclaim more and more land in the Sunderbans for the purpose of rice cultivation.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) The Sunderbans is not a low-lying marshy area.
 - (b) It is not covered by dense evergreen forests.
 - (c) There are many roads and railways here.
 - (d) Much of the land here is being reclaimed.
 - (e) The soil contains salt.
2. Give two reasons why the climate of the region is more equable—
 - (a)
 - (b)

3. Name some of the things obtained from this region—(a)
(b)
(c)
4. Name the important commodity which is supplied to Calcutta markets from this region.
5. How is the word 'Sunderbans' derived ?
6. Fill in the blanks :—

This region is drained by numerous _____ of the Ganga. New lands are being continuously formed by the deposition of _____ and _____. The 'Keya' bush is a type of _____ which grows on _____ and bears _____ that give out a fine _____. Gosaba is a group of _____ reclaimed for _____. The only mode of transport is by _____.

Project

Draw a simple sketch to show a river and its delta. How did the latter get its name? How is it formed? Study carefully the plan for reclaiming land for cultivation in the Sunderbans area and then write a comparison between it and a village in a farming district in any other part of West Bengal.

THE FOOD BOWL OF OUR STATE

In a previous chapter we learnt that Calcutta belongs to the industrial belt of the State. This industrial belt is also known as the Upper Deltaic Region and is a perfectly flat land.

West of this is a plains region which we will call the Western Plain. It is actually a continuation of the Upper Deltaic Region and covers the districts of a part of Birbhum, Murshidabad, Burdwan, Hooghly, Howrah and Midnapore which together form the Food Bowl of our State.

This also is a perfectly flat region composed of fresh alluvial soils. In

WESTERN PLAINS OF WEST BENGAL

Rice ----- ○
Jute ----- ●



fact, the land is enriched, year by year, by a fresh layer of this kind of soil left behind by the floods.

Most of the rivers are choked at present. They were active in the past but are now either dead or in a dying condition. A good example of such rivers is the Saraswati. As the rivers are choked there is no proper drainage and swamps are common.

The rivers Damodar, Ajay and Mayurakshi which also pass through this region become smaller in size as they give out distributaries. During the rains, when these rivers are swollen, floods are frequent. To prevent this, schemes known as Multipurpose Projects have been introduced.

The climate is hot and damp and there is a wide variation in temperature



IRRIGATION BY DEEP TUBEWELL

between the hot and cool seasons. Burdwan, for instance, has a mean summer temperature of about 109° F while in the cool season it is a little more than 47° F. The mean annual rainfall is nearly 60". Burdwan exports paddy and rice. It has many rice mills.

In the swampy areas, we find marsh vegetation. But grasses are mostly

grown and specially 'Shola' grass, the pith of which is used for making solar hats.

The flatness of the land and the abundance of water in the warmer months on account of the seasonal rain, favour growth. Crops grow rapidly during this season. Rice and jute are



DONGA SYSTEM OF IRRIGATION

the typical crops, but pulses, tobacco, sugarcane, potatoes, and various vegetables are grown with the help of primitive methods of irrigation. One such type is known as 'Donga' irrigation, which means that water is taken out from the river by means of a boat-shaped device generally made of wood. The crops grown are mostly for markets and the place where they are grown are known as Market Gardens.

Trees bearing betel leaves are another common sight of this region, and factories for rice milling and jute manufacture are widely spread.

EXERCISES

1. Are the following statements true ? Answer 'Yes' or 'No' in each case.
 - (a) This region is on the eastern side of the State.

- (b) The Donga system is a primitive form of irrigation.
- (c) Factories of jute and rice are a common sight here.
- (d) The climate is not hot and damp.
- 2. Why is the soil of this region very rich ?
- 3. What is a 'tributary' ?
- 4. Where do we find marsh vegetation ?
- 5. What do you understand by 'Donga' irrigation ?
- 6. Fill in the blanks :—

This region is perfectly ——— composed of fresh ——— soils. There is a wide variation in the ——— between the ——— and ——— seasons. ——— grass is used in making ———. Trees bearing ——— leaves are another common sight.

Projects

1. The students may be taught to draw rough sketches showing the main river with tributaries, distributaries, deltas, etc.
Alternatively, on a large scale physical map of West Bengal, or India, students may be asked to point out the main rivers, tributaries, distributaries, deltas, etc.
2. Ask each student to collect samples of the different types of soils which are to be found in the locality in which he or she lives or in the area surrounding his or her school.

THE COAL BELT OF OUR STATE

West Bengal is not only a land made up of alluvial deposits for there is an upland region along the western border, a belt of hilly area covering the districts of Birbhum, Burdwan, Bankura, and Midnapore. In fact, this upland region is an extension of an area known as the Chota Nagpur Plateau in the neighbouring State of Bihar. It is sometimes also called the Plateau Fringe Region of West Bengal. So we see that West Bengal is not only made up of highlands and river valleys. There is a small area above sea level with regular and fairly smooth surfaces.

This region of West Bengal is a rolling plateau—a peneplain area with monadnocks, that is, low hills here and there. One good example of this



feature would be the Panchaet Hill. The soil is made up of laterite and is badly worn out. To put it in another

way, we may say that a great deal of erosion has taken place in this area.

Another type of rock, called gneiss, is to be found in the western margin of Birbhum and in the neighbourhood of Bankura town. South of this town we find still another rock known as granite.

There are some rivers here which rise in the Chota Nagpur Plateau and empty themselves in the Bhagirathi-Hooghly. Their courses cross this region. They are in flood only during the rainy season. Otherwise, they are practically dry. Chief of these rivers are the Damodar, Ajay, and Mayurakshi. The Damodar is known as the 'River of Sorrow', on account of the great havoc which it causes when in



A VIEW OF THE DAMODAR WITH THE TILYA DAM

flood during the rainy season. It destroys life and property in the areas over which it flows.

Summers are hot while the cool season is dry and pleasant. The average rainfall is about 50". Asansol, a typical town of this region has an average mean summer temperature of about 113° F. The cool season records a mean

of 45° F and the average annual rainfall is about 57".

Actually the forests of this region are of the tropical type with deciduous trees, that is, trees that shed their leaves during a particular season. The typical tree is the Sal. But most of the natural vegetation here has been badly cut down by man and this has given rise to erosion in many parts. In fact, no tall trees are to be seen here. Some of the forest products obtained indirectly are lac, cocoons, honey, wax and the like.

Of the cultivated crops, the most important is rice. After the completion of some projects around this area, like the Damodar and Mayurakshi Multipurpose Projects, it should be

possible to grow rabi (or cool season) crops here.

Along the banks of the Damodar river, there are beds which contain seams of coal. Coal is a mineral which occurs in seams or layers in between beds of rock of other kinds. It is produced from decayed vegetation. Trunks, leaves and stems of dead plants of many kinds were accumulated in swampy areas millions of years ago. They were buried under mud and sand. They were compressed and hardened and slowly changed into coal. The area of a country where coal is obtained by mining is termed a coalfield. In West Bengal, coalfields in this region are to be found in the Asansol-Raniganj area and most of the coal is of good quality.

Coal is a very useful mineral and an important source of power. It is used in the home, and in nearly every factory. It provides the power that drives the machines in the workshop, through the steam-engine or the dynamo. It is necessary for the smelting of iron and other ores and our railway engines and steamships use it in great quantities.

Numerous industries have sprung up due to the presence of this source of power in the region. The Asansol area has become famous for the manufacture of iron and steel, porcelain pipes, firebricks, aluminium goods, locomotives, etc. Red pebbles and laterites are also available here for the construction of roads and for other purposes.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) The upland region is not an extension of the Chota Nagpur Plateau.
 - (b) This region is a peneplain.
 - (c) The typical tree here is teak.
 - (d) Coal is a black shining soft material.
 - (e) Asansol area is not famous for industries. ...
2. Why is the Damodar called the 'River of Sorrow'?
3. What do you understand by 'rabi crops'?
4. What is a coalfield?
5. Give some uses of coal.
6. What does 'deciduous' mean?
7. Fill up the blanks :—

Most of the natural vegetation of this region has been _____ and this has resulted in _____. _____ is the most important crop here. In West Bengal, the two coalfields are in _____ and _____. The quality of coal is _____. Many _____ have sprung up in this _____ due to the presence of this _____ of power. Laterite, gneiss and granite are other useful _____ found in the region.

Projects

1. What rocks form the surface layers of the land in your neighbourhood?
2. Make a list of the purposes for which coal is used in your own neighbourhood.
3. If possible, the class could be taken to a coalfield or shown some pictures associated with coal-mining.

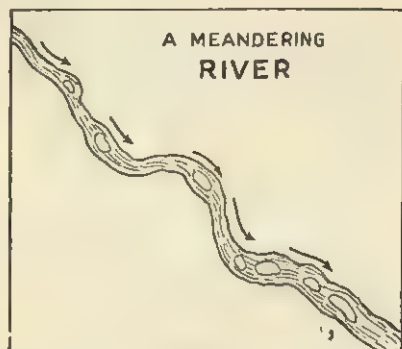
THE MANGO GARDENS OF OUR STATE

We already know that East Pakistan divides our State into two parts, the north which is made up of the districts of Darjeeling (Highland Region), Jalpaiguri and Cooch Behar, and another section, north of the river Ganga (Ganges) known as the Plains of Malda and West Dinajpur. The southern part makes up the remaining districts which we have already discussed in the previous chapters.

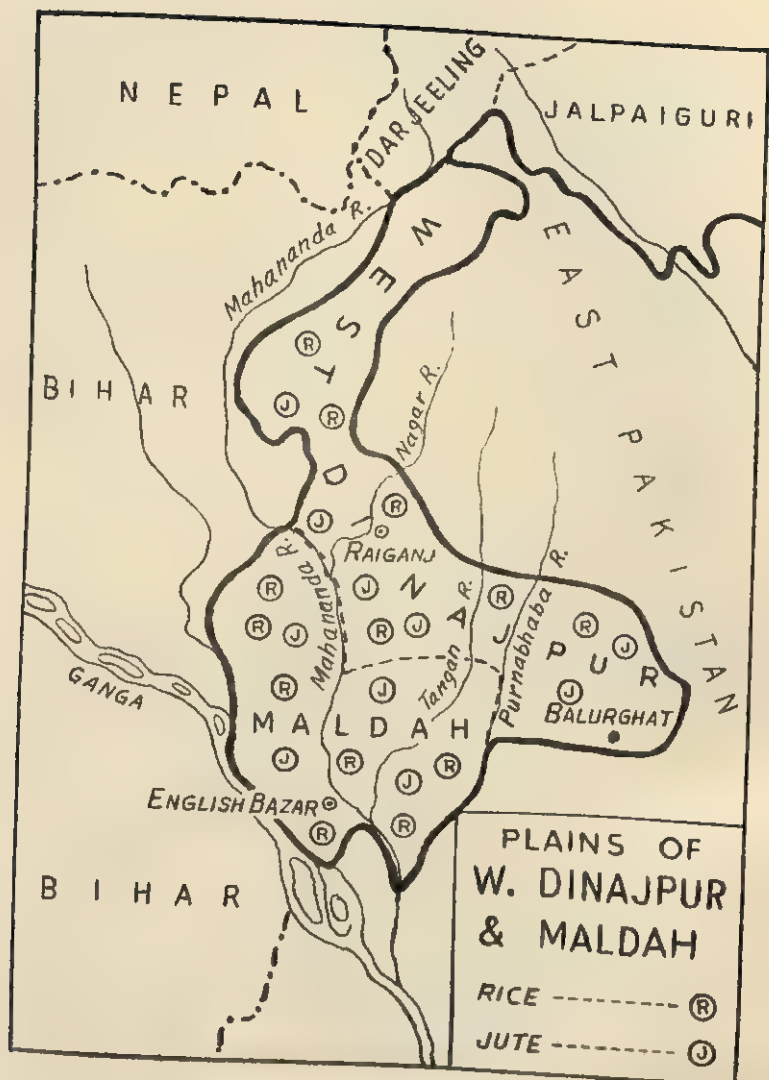
This region known as the Plains of Malda and West Dinajpur, is perfectly flat land built up by the rivers Punarbhaba, Nagar and Mahananda.

These rivers are meandering and are tributaries of the main rivers Ganga and Brahmaputra. The soil is alluvial and hence very fertile.

The climatic conditions, though typically monsoon, vary from those of the districts of Darjeeling,



Jalpaiguri and Cooch Behar. The temperatures are high, ranging from 70° to 85° F. There is, however, a wide range in the amount of rainfall, West Dinajpur getting about 83" of rain per year while Malda receives the lowest in the whole of our State, namely, about 44" a year.



This region has no big forests. Most of them have been cleared. Marshy grasses and bushes may be found scattered here and there.



A MANGO ORCHARD

In the northern parts of this region, we find hard clayey soil which is difficult to plough but which is most suitable for mango orchards or gardens. The famous Malda



PADDY TRANSPLANTING

mangoes are in great demand throughout India. In the remaining parts, agriculture is the mainstay of the people and rice and jute are the chief crops grown.

Some fields which are rich in lime and potash, are utilised for the growth of sugarcane and tobacco. Economically, this region is backward on

account of the poor transport facilities.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) The plains of Malda and West Dinajpur belong to the southern part of West Bengal.
.....
 - (b) These plains are north of the Ganga.
 - (c) The rivers here are not tributaries.
 - (d) Rainfall in this region is uniform.
 - (e) Agriculture is the main occupation of the people of this region.
2. What does 'meandering' mean?
3. Why have the forests been cleared in this region?
4. Why is this region economically backward?
5. Fill in the blanks :—

The soil is _____ and hence very _____. Malda receives the _____ rainfall in the whole of West Bengal. The hard clayey soil is difficult to _____ but is suitable for _____ orchards. From Malda, mangoes are in great demand throughout _____. Where agriculture is practised _____ and _____ are the main crops. Land rich in lime and potash is utilised for the growth of _____ and _____.

Projects

1. Make a list of the different kinds of mangoes which are available in the bazaar during the mango season. Find out the parts of India from which these mangoes come.
2. Which mango has, in your opinion, the best taste ?
Alternatively, the students may be taken to a mango garden or orchard or fruit market and asked to observe the various fruits.

THE TERAJ FOREST REGION

This region, also known as the Duars and adjacent areas, consists of the dis-



tracts of Jalpaiguri and Cooch Behar. It is mostly an alluvial plain with deposits of sand and pebbles to the north. The slope is generally southward.

This flat land is drained by numerous hill streams which are perennial, that is, they always have water in their courses since they are fed by the melting snows of the Himalayas from where they rise. Actually, they are tributaries of the two important rivers of northern India, the Ganga and the Brahmaputra. During the rainy season, they overflow their banks. The chief of these are the Tista, Torsha, Raidak, and Jaldhaka which flow into the Brahmaputra, and the Mahananda which is a tributary of the Ganga.



The climate is damp and hot, the average being 80° F in the hot season.

During the months of October to January, it is cool and dry. Rainfall during the hot season is heavy.

Wet evergreen forests known as the 'Terai' are found here, the common trees being bamboo, sal and teak.

Near the foothills, some tea gardens



A BAMBOO GROVE

have been opened up on account of the favourable rain and soil conditions. Moreover, the opening of roads and railways has improved the transport facilities of this region. In fact, today, the preparation of tea for export is an organised industry here, with warehouses for blending and other processes of manufacture.

The valuable timbers of the forests have given rise to timber mills. Some rice is also grown, mostly for local use.

In recent years, many refugees from East Pakistan have been settled in those parts where the forests have been cleared. The new settlers are engaged in growing crops, especially jute.

Jalpaiguri is the important town of this region.

EXERCISES

1. Are the following statements true? Answer 'Yes' or 'No' in each case.
 - (a) The Duars region is mostly an alluvial plain. ...
 - (b) The slope of the land is generally northward. ...
 - (c) The preparation of tea for export is an organised industry here.
 - (d) The timbers of the forests are not valuable. ...
 - (e) Transport facilities are not good here.
2. What does "perennial" mean?
3. What does "tributary" mean?
4. Name one important tributary of the Brahmaputra which flows through this region.
5. Fill in the blanks :—

The——which flows through this region joins the Ganga. The climate is——and——; and the rainfall is more than——inches. Wet evergreen forests found here are known as the——. Dense——vegetation is common. Some——is grown but mostly for local use. ——from East Pakistan resettled here mostly grow——. ——is the important town here.

Project

A visit to a tea garden or tea factory may be arranged by the teacher for the students who will observe and take notes. Later, they may be asked to write a few sentences on what they have seen.

THE TEA-GROWING REGIONS OF OUR STATE

This is the northernmost part of West Bengal known as the Darjeeling Himalayas. It is a highland region and is part of the great Himalayan mountain system.

It is very different from most other parts of our State in its relief, climate, vegetation and in the ways in which the people make a living. Even the people here are different. They are short and sturdy. They are known as Nepalese, Bhutanese and Sikkimese.

Here are to be found deep gorges, towering mountains and knife-edged



THE HIMALAYAS

ridges, The steep slopes are densely forested.

Many streams have their origin here. They are swift-flowing in their upper courses and this enables them to be utilised for producing electricity.

The temperature in this part of the State varies according to height. Very

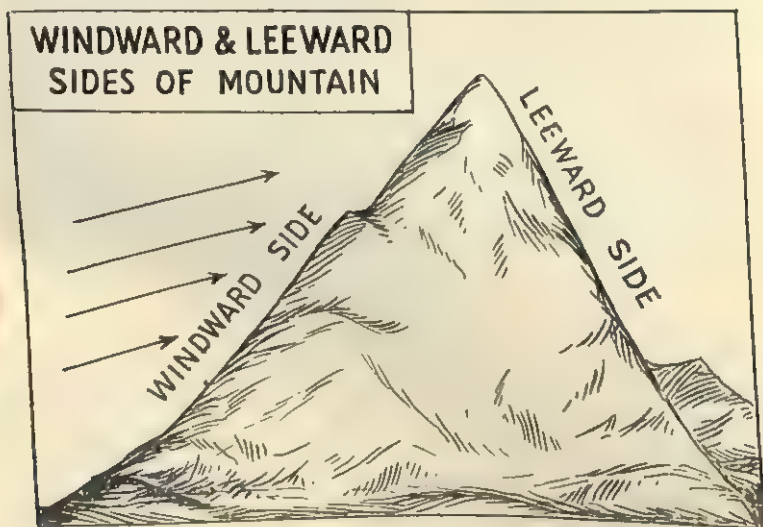


HILL WOMEN

high up, the cold season is long and severe, with falls of snow, but in the lower parts, the climate is more pleasant. The months of September, October and November have the best weather, when the sky is clear and the atmosphere is free from moisture.

During the rainy season, that is from June to September, this region

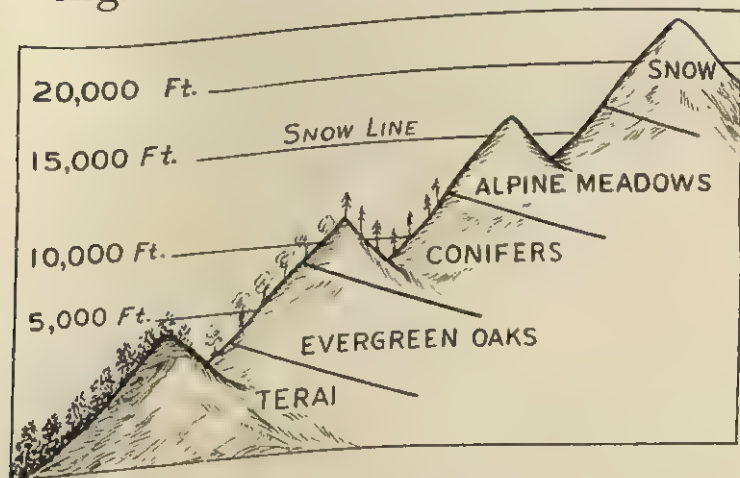
experiences the highest amount of rainfall, which ranges between 100 and 200 inches per year. This part of our State experiences the highest amount of rain-



fall because the mountains intercept the rain-bearing winds known as the South-West Monsoon winds and cause heavy rain on the windward side.

Thus one side of such mountains

will have much more rain than the other. In this way, these mountains cause much more rain to fall in West Bengal and especially along the foot-



hills than in Tibet which is on the other side.

As in the case of temperature, so with natural vegetation. It varies according to height. In lower parts and along the foot-hills, there are dense

trees of sal and bamboo. Slightly higher, that is, up to 6,000 feet, we find birch, beech, oak, and other trees. But still higher, up to 9,000 feet, soft wood trees like pine, fir and deodar are to be found. Above 9,000 feet, junipers, and other short trees, known as alpine vegetation, are common.

We already know that the plains attract, while mountains and hills repel, human settlement. The population in the highlands of West Bengal is, therefore, very scanty especially when compared to the plains.

The soil is not suitable for cultivation but special crops are grown along the lower slopes.

Tea and cinchona are the major 'Plantation' crops of this region. In

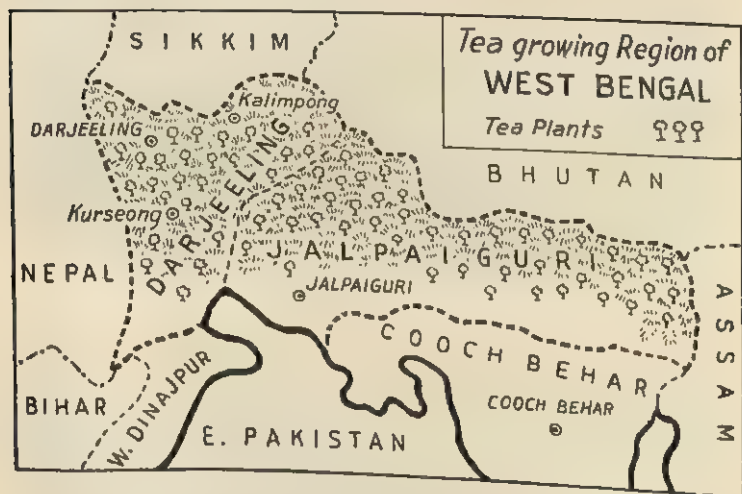


A TEA GARDEN

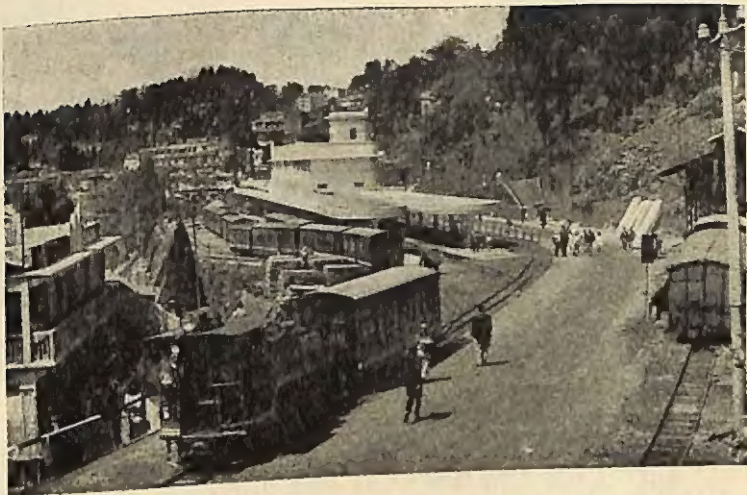


A TEA FACTORY

fact, some of the finest quality tea is grown here. Oranges, vegetables and potatoes are some of the other things that are produced.



As the weather in the highlands is very bracing, some hill stations have sprung up. These pleasure and health resorts are visited by people from the plains during the hot season. Darjeeling, Kurseong and Kalimpong are



DARJEELING RAILWAY STATION

examples of the more popular hill stations in this region.

EXERCISES

- I. Are the following statements true? Answer 'Yes' or 'No' in each case.
- (a) The highland area of West Bengal is found in the south.
 - (b) More rain falls in the plains than along the foothills of the Darjeeling Himalayas.
 - (c) Bamboo vegetation is found in the higher parts of the mountains.

- (d) There is a dense population in the highlands of West Bengal.
- (e) Some hill stations have sprung up in these highlands.
2. What do you understand by 'Plantation' crops?
 3. What is the name of the rain-bearing winds that bring rain to West Bengal?
 4. Why are swift-flowing streams useful?
 5. Of what use are the hill stations?
 6. Fill in the blanks :—

Many streams have their——in these mountains. Very high up, the cold season is——and——. The rainy season lasts from——to——. Natural vegetation varies according to——. Junipers are found above——feet. ——is the major 'Plantation' crop. ——is the important hill station.

Project

Make a list of the different things used in the Plains which are brought from the highlands of West Bengal. Distinguish those that are used (i) fresh (ii) dried (iii) tinned. Make a list of some common trees of this region whose timbers are useful. Mention for what they are used.



